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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,105	10/08/2003	Kenji Abe	1448.1044	4450

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EXAMINER	
RADOSEVICH, STEVEN D	
ART UNIT	**PAPER NUMBER**
2138	

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/680,105	ABE ET AL.	
	Examiner	Art Unit	
	Steven D. Radosevich	2138	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 10-8-03
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-12 are present for examination.

Priority

Acknowledgement is made that foreign priority is claimed for this application and as such the date (10/09/2002) is being used for this examination.

Information Disclosure Statement

Acknowledgement is made that an Information Disclosure Statement (IDS) was provided with the application and as such reviewed.

Drawings

The drawings (27-29) are objected to since it is unclear to the examiner (from the drawings and from the specification) what the specific values are for D1, D2, D3, and D4. It should be noted that any signal can only hold one state (low or high) at any given time such as the reset in figure 29; D1 and D2 in figure 29 seem to simultaneously holding a low and high. Appropriate correction is required for these figures.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-10 are rejected under 35 U.S.C. 101 because these are method claims, not a program per se (viewable as an "attempt" to claim a manufacture). It appears that the described practical utility is to either validate an apparatus or at least generate an input/output sequence and provide it, as a validation pattern, to the apparatus to be validated. The claims stop short of reflecting practical utility as it stops at the extraction

of what is called "a validation item" which is preliminary to the generation of the input/output sequence. Also, the recited steps of the claims, in toto, indicate that this is directed as an abstract idea as understood from reviewing the relevant portion of the description. Thus, it appears that the claims lacks both a useful result (reflective of the described practical utility) and a tangible result (a result having real world value). Therefore these claims are not patent eligible under 35 USC 101 for failing to practically apply a judicial exception (in this case, an abstract idea) so as to produce a useful, tangible and concrete result.

Claims 11 and 12 are rejected under 35 U.S.C. 101 because both claims 11 and 12 is directed to a program per se that fails to be embodied on an appropriate computer-readable storage medium which is necessary to provide a functional interrelationship between the computer program and the computer that executes the computer program and would not, therefore, be patent eligible under 35 USC 101.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 recites the limitation "*the functional device" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-12 are rejected under 35 U.S.C. 102(a) as being anticipated by Firth et al. (US 2002/0138802 A1).

As per claim 1, Firth teaches a method of validation support comprising:

Inputting functional configuration information (data from the stimulus scan cells) that represents a function (memory test) of an apparatus (300 – figure 3) to be validated (0091);

Inputting a condition (identifier for each test) for an input/output sequence (test) that is assigned (to be applied) to the apparatus (0093);

Generating a validation item function (original input – 0003 line 9) that satisfies all conditions for the input/output sequence, based on the functional information (0003 lines 8-9, see figures 1-3, and 0087); and

Extracting a combination of configuration elements (401, 402, and 403 that make up 305 in figures 3 and 4) that constitute the functional configuration information as a validation item (test sequence – 0101 line 3), based on the validation item function (see figures 3 and 4).

As per claim 2, Firth teaches the method according to claim 1, wherein

The validation item function is expressed by a binary decision diagram, and (Examiner believes to be inherent 0090 – 0091)

The validation item (memory test) is extracted based on the validation item function (data from the stimulus scan cells) that is expressed by the binary decision diagram (Examiner believes to be inherent 090 – 0091)

As per claim 3, Firth teaches the method according to claim 1, wherein the condition for the input/output sequence includes a resource constraint condition (0093

lines 1-5) for a functional device (403 figure 4) in the configuration elements that constitute the functional configuration information.

As per claim 4, Firth teaches the method according to claim 1, wherein the condition for the input/output sequence includes a condition that makes a limitation on a configuration element to be validated among the configuration elements that constitute the functional configuration information (0102).

As per claim 5, Firth teaches the method according to claim 1, wherein

Priority information is added to a functional device in the configuration elements that constitutes the functional configuration information (0102), and

The method further comprises calculating a validation priority based on the priority information of the device for each validation item (0094 and Examiner believes to be inherent 0003 lines 9-10).

As per claim 6, Firth teaches the method according to claim 1, further comprising:

Inputting number of validation items to be extracted, wherein

The validation item is extracted based on the number of validation items input (0092, 004-0012).

As per claim 7, Firth teaches the method according to claim 1, further comprising:

Converting validation item description information that describes an operation of the functional device that constitutes the functional configuration information into information that does not describe the operation of the functional device, wherein the information converted is input as the functional configuration information (0087, 0093).

As per claim 8, Firth teaches the method according to claim 1, further comprising:

Inputting a validation environment that defines a flow of data that is input to and output from the apparatus to be validated (301 - figure 3, 0087-0088, 0090-0091); and

Creating an input/output sequence to be applied to the apparatus to be validated, based on the validation environment and the validation item (figures 3 and 4, 0091, 0096, and 0102).

As per claim 11, Firth teaches a computer program that makes a computer execute:

Inputting functional configuration information that represents a function of an apparatus to be validated (0091);

Inputting a condition for an input/output sequence that is assigned to the apparatus (0093);

Generating a validation item function that satisfies all conditions for the input/output sequence, based on the functional configuration information (0102 and see figure 4) ; and

Extracting a combination of configuration elements (0097 lines 1-3 and 0101 lines 2-3) that constitute the functional configuration information as a validation item (particular test – 0093 line 4), based on the validation item function (0102 and see figure 4).

As per claim 12, Firth teaches an apparatus for validation support comprising:

An information input unit that inputs functional configuration information that represents a function of an apparatus to be validated (301 – figures 3 and 4 and 0091);

A condition input unit that inputs a condition for an input/output sequence that is given to the apparatus (0093);

A generation unit that generates a validation item function that satisfies all conditions for the input/output sequence, based on the functional configuration information (401 – figure 4 and 0102); and

An extraction unit (403 – figure 4) that extracts a combination of configuration elements (0097 lines 1-3 and 0101 lines 2-3) that constitute the functional configuration information as a validation item (particular test – 0093 line 4), based on the validation item function (0102 and see figure 4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Firth et al. (US 2002/0138802 A1).

As per claim 9, Firth teaches the method according to claim 7 described above.

Firth does not specifically teach the method according to claim 7 described above wherein:

The functional configuration information is input from a predetermined information terminal via a network,

The condition for the input/output sequence is input from the information terminal via the network, and

The validation item is output to the information terminal via the network.

However, in view of the IEEE definition of a network "a series of points interconnected by communication channels" examiner notes it would have been obvious to one of ordinary skill in the art at the time the invention was made since the prior art is replete with references in which a network is used to use a network as described by the applicant.

Therefore, one would me motivated to use a network to provide and receive the above information as suggested in figures 1-4 of Firth to relay information.

As per claim 10, Firth teaches the method according to claim 8 described above.

Firth does not specifically teach the method according to claim 7 described above wherein:

The functional configuration information is input from a predetermined information terminal via a network,

The condition for the input/output sequence is input from the information terminal via the network,

The validation environment is input from the information terminal via the network,

The validation item is output to the information terminal via the network, and

The input/output sequence is output to the information terminal via the network.

However, in view of the IEEE definition of a network "a series of points interconnected by communication channels" examiner notes it would have been obvious to one of ordinary skill in the art at the time the invention was made since the prior art is replete with references in which a network is used to use a network as described by the applicant.

Therefore, one would me motivated to use a network to provide and receive the above information as suggested in figures 1-4 of Firth to relay information.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Radosevich whose telephone number is 571-272-2745. The examiner can normally be reached on 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 571-272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Radosevich
Examiner
Art Unit 2138

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